

INTRODUCTION

The “AIRLINES MANAGEMENT” is all about automation of registration process of airline system. The system will be able to provide much information like passengers' information, list of all passengers etc. The system also allows us to add records when a passenger reserves a ticket.

Traditional record system on the paper requires more maintenance and efforts. The problem of finding the relevant information had proved to be very difficult task in comparison to the online management system.

And also, today all person is busy with their schedule and no one have time to make a trip for holidays with their family and this Airline Reservation Process is very difficult to understand in General meaning. But we are providing a Solution for that Problem.

This system provides a facility to easy access towards a customer and a real time user. They can easily connect through it and just 3 steps. There is no requirement for any type of Agent. We are giving an all this facility in one project “Airlines Reservation System”.

AIM OF THE PROJECT

The main aim of the project is to develop an electronic airlines reservation system that handles flights and passengers' records to enhance the accuracy, flexibility, reliability and to remove the human's error. To provide some amount of automation in airlines management. To help airlines system in making their business more efficient and added attraction for their potential customers. It will also show the attitude of the management that they are aware to the newly introduced technology and ready to adopt them.

It helps to store the records of passenger in particular CSV files in the system and these records can easily be accessed in fast and accurate manner through the frontend interface.

An airline provides air transport services for passengers, generally with a recognized operating. To provide accurate information about the addition, deletion and modified reservations and food item details. To provide, efficient, accurate, reliable, fast, and robust structure that can handle any number of passengers' transactions.

ADMIN WILL BE ABLE TO:

- View flight details
- Add new flight information
- View all booking
- Modify flight details
- Delete flight information

PASSENGER WILL BE ABLE TO:

- Registration
- View all flights
- Search flight by their name and destination
- Booking

MERITS

- 1)Easy to edit and view your Personal Information
- 2)User Friendly
- 3)Secure
- 4)No possibility of the missing data.
- 5)Easy to modify and delete any records.
- 6)All the information about the users and bookings can be maintained in an effective and efficient manner.
- 7)Saves a lot of time in searching, requesting and issuing.
- 8)The system contains all the up-to-date information and stores information.
- 9)The software acts as a 24X7 office because of all-time availability.
- 10)Offers quality Services to the customer.

DEMERITS

- 1)It is difficult to run efficiently by man power.
- 2)The system is run manually by the data.
- 3)It is difficult to respond every user within a short period.
- 4)The danger of losing the information in some cases.
- 5)The problem of maintaining the information of registered users

DESCRIPTION AT A GLANCE

This software has two parts. First is user part and the administrator part. User part is used as a front end and administrator is the back end. Administrator is used by airline authority. It will allow the customers to access database and allow new customers to sign up for online access.

The system allows the airline passenger to search for flights that are available between the two travel cities, namely the "Departure city" and "Arrival city" for a particular departure and arrival dates. The system displays all the flight's details such as flight no, name, price and duration of journey etc. After search the system display list of available flights and allows customer to choose a particular flight. Then the system checks for the availability of seats on the flight. If the seats are available then the system allows the passenger to book a seat. Otherwise, it asks the user to choose another flight. To book a flight the system asks the customer to enter his details such as name, address, city, state, and credit card number and contact number. Then it checks the validity of card and book the flight and update the airline database and user database. The system also allows the customer to cancel his/her reservation, if any problem occurs.

The main purpose of this software is to reduce the manual errors involved in the airline reservation process and make it convenient for the customers to book the flights as when they require such that they can utilize this software to make reservations, modify reservations or cancel a particular reservation.

REQUIREMENTS SPECIFICATION

The requirement specifications for this project are as follow:

• HARDWARE REQUIRED:

1. Intel Platinum or similar processor-based PC at client-server end.
2. 128 MB RAM and 4 GB HD space (for CSV FILE) is desirable.
3. Standard I/O devices like keyboard and mouse etc.
4. Printer is needed for hard copy reports.
5. Local Area Network (LAN) is required for client-server architecture.

• SOFTWARE REQUIRED:

1. Windows 10 OS is desirable.
2. Spyder IDE 3.6

Note: -LANGUAGE USED: Python

Note: -The data will be stored in CSV FILE

SOFTWARE APPLICATION

An application software is a program, or group of programs, that is designed for the end user. Applications Software (also called end user programs) include such things as database programs, word processor and spreadsheets.

It has mainly two working components: -

1. Front-end
2. Back-end

FRONT-END:

A Front-end interface can display various graphical control/objects. The front-end is a part of software system that deals with the users, collects inputs from users in variety of ways and provides information to use effectiveness of a front-end depends, a lot of its design, connect, features and connectivity with the back-end.

FEATURES OF FRONT-END:

- The features of front-end can be broadly divided into two categories:
- Display features
- Functionally features

BACK-END:

The back-end is part of the application that does the real processing work or gets it done from the server. It is responsible for processing the data for user queries and request. The back end of a system is controlled by database management system that respond to each request made by front-end software for processing the front-end request, the back-end maintain a database.

The back-end is responsible for all the users request to serve the users' request; it has to interact with database to obtain data and server to get the work done. After processing the given request and queries, server returns the result, which the back-end first interpret then passes them over to the front-end.

FEATURES OF BACK-END:

- Back-end code adds utility to everything the front-end designer creates.
- The back-end is a combination of a database and software written in a server-side language, which is run on web servers, cloud-based servers, or a hybrid combination of both.
- A network's server set-up can vary, with the server-side workload divided up between various machines (e.g., a server dedicated to housing the database). Database via an application programming interface (API), which pulls, saves, or changes data.
- The data are returned & converted into front-end code a user interacts with: filling out of a form, creating a profile, shopping online etc.
- In general, anything you see on a site is made possible by back-end code, which exists on, and is powered by a server.

In our project, Front-end is designed with Python (programming language) using Spyder IDE (IDE software) and Back-end is developed with a CSV file.

SOFTWARE USED:

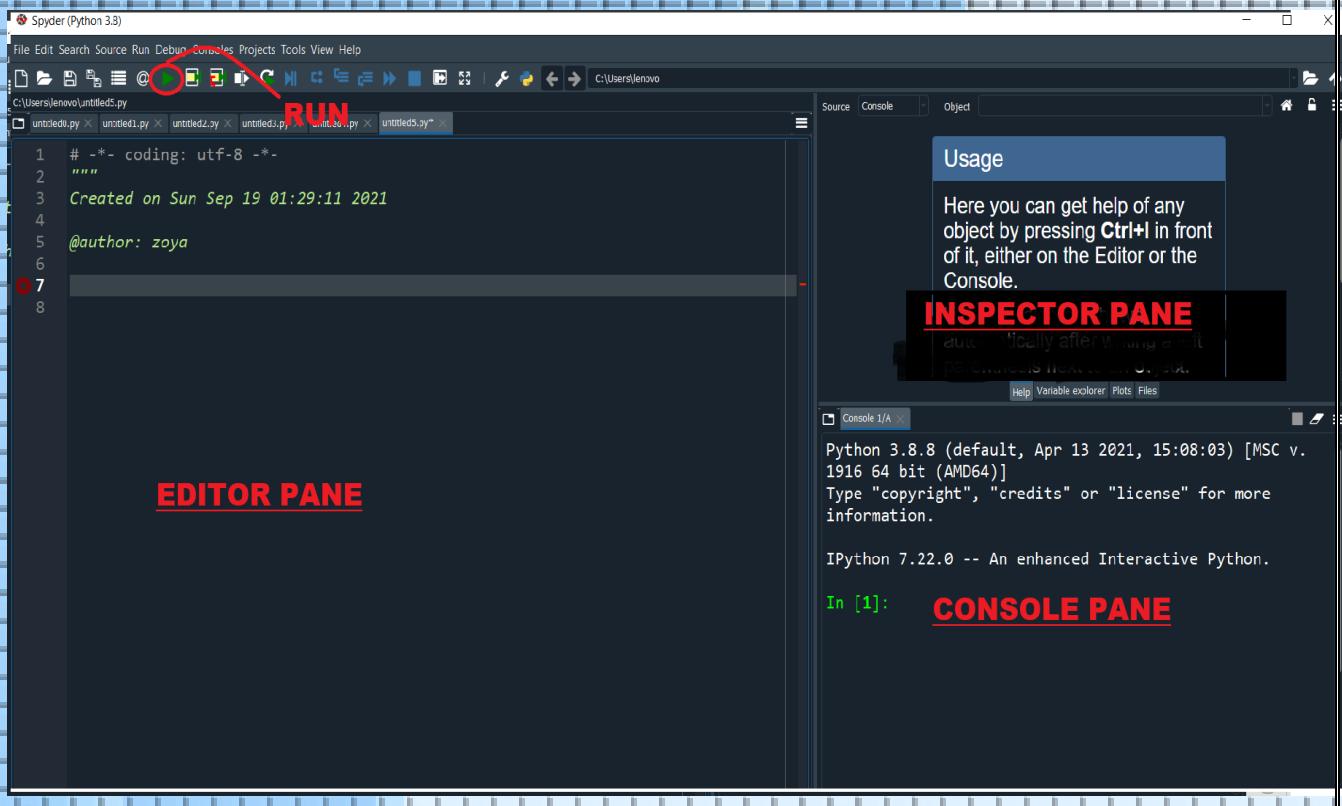
SPYDER (version 3.8) IDE

The Python Spyder IDE is written completely in Python. It is designed by scientist and is exclusively for Scientist, data analysts, and engineers. It is also known as the Scientific Python Development IDE. Spyder is an open-source, cross-platform IDE.

Features of Spyder are:

- Customizable syntax highlighting.
- Availability of breakpoints (debugging and conditional breakpoints).
 - Interactive execution which allows you to run line, file, cell, etc.
 - Run configuration for working directory selections, command-line options, current/dedicated/external console, etc.
- Navigation through cells, functions, blocks, etc. can be achieved through the Outline explorer.
 - It provides real-time code introspection (the ability to examine what functions, keywords and classes are, what they are doing and what information they contain).
 - Automatic colon insertion after if, while, etc.
 - Inline display for graphics produce using Matplotlib.
 - Also provides features such as help, file explorer, find files, etc.

SPYDER INTERFACE



The Spyder interface. There are four main elements to the Spyder interface to be aware of:

- The editor:** This is the large vertical pane on the left, with the numbered lines down the side. This is where we will type in our Python commands.
- The “run” button:** This is the green “play” icon (triangle pointing to the right) on the icon bar towards the top of the screen.
- The “Usage” pane:** A floating window that provides help for objects. It says: “Here you can get help of any object by pressing **Ctrl+I** in front of it, either on the Editor or the Console.”
- The “Console” pane:** The rightmost pane, showing the Python and IPython consoles.

Python Version	Released Date
Python 1.0	January 1994
Python 1.5	December 31, 1997
Python 1.6	September 5, 2000
Python 2.0	October 16, 2000
Python 2.1	April 17, 2001
Python 2.2	December 21, 2001
Python 2.3	July 29, 2003
Python 2.4	November 30, 2004
Python 2.5	September 19, 2006
Python 2.6	October 1, 2008
Python 2.7	July 3, 2010
Python 3.0	December 3, 2008
Python 3.1	June 27, 2009
Python 3.2	February 20, 2011
Python 3.3	September 29, 2012
Python 3.4	March 16, 2014
Python 3.5	September 13, 2015
Python 3.6	December 23, 2016
Python 3.6	December 23, 2016
Python 3.7	June 27, 2018
Python 3.8	October 14, 2019

WINDOWS 10 OS

WINDOWS 10 OS is used as a platform in this project. Windows 10 OS is an operating system developed by Microsoft. Microsoft described Windows 10 as an “operating system as a service” That would receive ingoing updates to its features and functionality, augmented with the ability for enterprise environments to receive non-critical updates as slower or use long-term support to milestone that will only receive critical update such as security patches, over their five-year lifespan of mainstream support. It was first released in July 2015.

PROGRAMMING LANGUAGE: PYTHON

Python is an interpreted, high-level and general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant indentation. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects.

Python is dynamically-typed. It supports multiple programming paradigms, including structured (particularly, procedural), object oriented and functional programming.

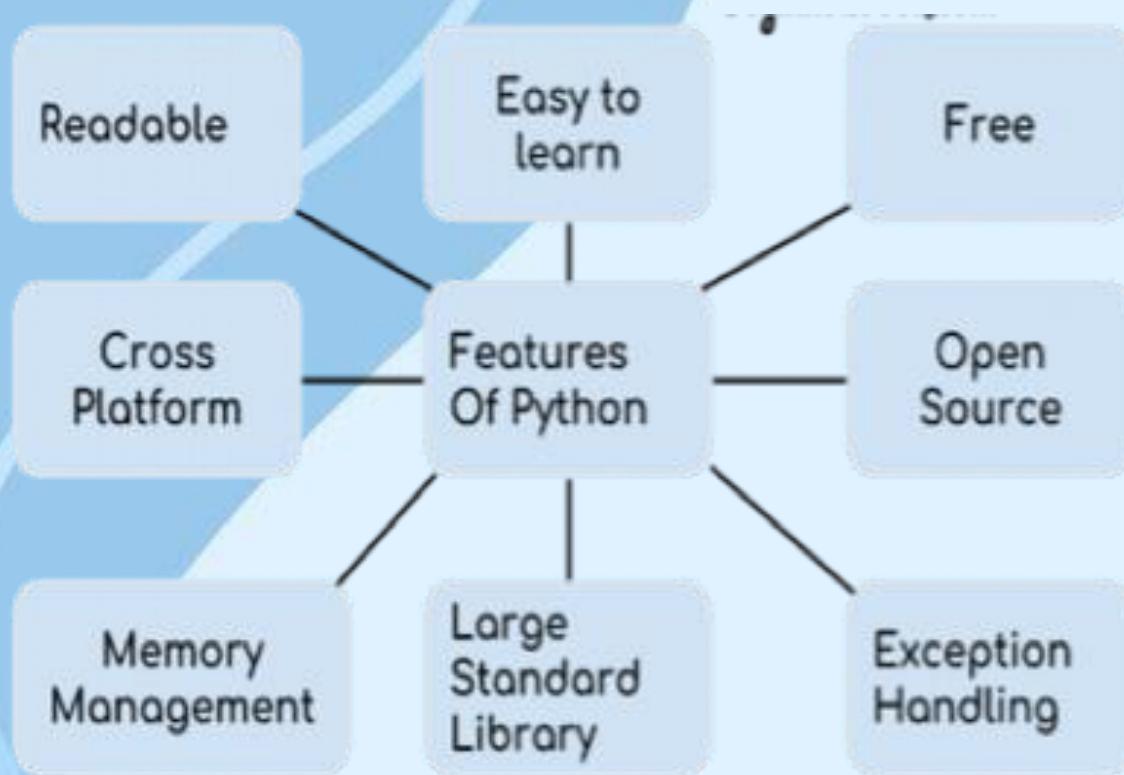
Python was created in the late 1980s and first released in 1991, by GUIDO VAN ROSSUM as a successor to the ABC programming language Python 2.0 was released in 2000 and introduced new features, such as list comprehensions and a garbage collection system using reference counting and was discontinued with version 2.7.18 in 2020. Python 3.0 was released in 2008 and was a major revision of the language that is not completely backward-compatible and much Python 2 code does not run unmodified on Python 3. With Python 2's end-of-life (and pip having dropped support in 2021), only Python 3.6 and later are supported, with older versions still supporting e.g., Windows 7 (and old installers not restricted to 64-bit Windows).

Python interpreters are supported for mainstream operating systems and available for a few more (and in the past supported many more). A global community of programmers develops and maintains python, a free and open-source reference implementation. A non-profit organization, the Python Software

Foundation, manages and directs resources for Python and Python development.

As of January 2021, Python ranks third in TIOBE's index of most popular programming languages, behind C and Java, having previously gained second place and their award for the most popularity gain for 2020.

Features of Python programming language



BACK END USED

CSV

A CSV file is a Comma Separated Values file. All CSV files are plain text files, can contain numbers and letters only, and structure the data contained within them in a tabular, or table, form. Files ending in the CSV file extension are generally used to exchange data, usually when there's a large amount, between different applications. Database programs, analytical software, and other applications that store massive amounts of information (like contacts and customer data), usually support the CSV format. A Comma Separated Values file might sometimes be referred to as a Character Separated Values or Comma Delimited file, but regardless of how someone says it, they're talking about the same CSV format.

PACKAGES IMPORTED

PANDAS

In computer programming, pandas are a software library written for the Python programming language for data manipulation and analysis. In particular, it offers data structures and operations for manipulating numerical tables and time series.

It is the most famous python package for data science which makes data analysis and manipulation easy.

It is a high-level data manipulation tool developed by Wes McKinney and built on packages like NumPy and matplotlib to give us single and convenient place for data analysis and visualization work.

The term pandas are derived from 'Panel data system', which is an echometric term for multidimensional, structure dataset. Pandas are an open source. Pandas' library provides high-performance, structure, easy-to use data structure and data analysis tools.

It is used in a wide range of fields including academic and commercial domains which include finance, economics, statistics, analytics, etc.

(import pandas as pd)

Feature of Pandas: -

1. It can read or write in many different data formats (integer, floated.)
2. Columns from a panda's data structure can be deleted or inserted.

3. It supports group by operations for data aggregation and transformation and allow high performance merging and joining of data.
4. It has the functionality to find and fill the missing data.
5. It allows us to apply operations to independent groups within the data.
6. It supports data visualization by integrating libraries such as matplotlib and seaborn, etc. Pandas is best at handling huge tabular datasets comprising different data formats.

MATPLOTLIB

A matplotlib is an open-source Python library which used to plot the graphs. It is originally conceived by the John D. Hunter in 2002. The version was released in 2003, and the latest version is released 3.1.1 on 1 July 2019. It represents the data through the graphical form. One of the greatest benefits of visualization is that it allows us visual access to huge amounts of data in easily digestible visuals. Matplotlib consists of several plots like line, bar, scatter, histogram etc.

(import matplotlib as plot)

OS

OS module in Python provides functions for interacting with the operating system. OS comes under Python's standard utility modules. This module provides a portable way of using operating system dependent functionality. os.path module is sub module of OS module in Python used for common path name manipulation. os.path.isfile() method in Python is used to check whether the specified path is an existing regular file or not

DATEANDTIME

Python Datetime module supplies classes to work with date and time. These classes provide a number of functions to deal with dates, times and time intervals. Date and datetime are an object in Python, so when you manipulate them, you are actually manipulating objects and not string or timestamps.

SOURCE CODE

WELCOME SCREEN

#ONLINE FLIGHT RESERVATION SYSTEM

```
print("~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-")
print("          WELCOME TO ONLINE FLIGHT RESERVATION SYSTEM          ")
print("~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-~-")

while (True):
    print(" ")
    print("1. ADMIN LOGIN ")
    print("2. NEW ADMIN REGISTRATION ")
    print("3. LOG OUT ")
    choice=int(input("ENTER YOUR CHOICE: "))
```

ADMIN_MENU

SIGNUP OPTION CODING

IMPORTED PACKAGE

```
import pandas as pd
elif (choice == 2):
    user_id=input("ENTER USER ID: ")
    password=input("ENTER PASSWORD: ")
    re_password=input("CONFIRM PASSWORD: ")
    if (password==re_password):
        print("please enter the following details: ")
        name=input("Name: ")
        dob=input("Date of Birth: ")
        gender=input("Gender (M/F): ")
        phone_no=input("Phone Number: ")
        email_id=input("Email ID: ")
        dic={"USER ID":user_id,"PASSWORD":password,"NAME":name,
              "DATE OF BIRTH":dob,"GENDER":gender,"PHONE NUMBER":phone_no,
              "EMAIL ID":email_id}
        if (os.path.isfile("login_detail.csv")):
            df1=pd.read_csv("login_detail.csv")
            df=pd.DataFrame(dic,index=[len(df1)+1])
            df.to_csv("login_detail.csv",mode="a",header=None)
        else:
            df=pd.DataFrame(dic,index=[1])
            df.to_csv("login_detail.csv")
        print("-----")
        print("YOU ARE SUCCESSFULLY REGISTERED ")
        print("-----")
    else:
        print(" PASSWORD DOESN'T MATCH! please retype the password carefully")
```

LOGIN

```
if (choice == 1):
    user_id=input("USER ID: ")
    password=input("PASSWORD: ")
    if (os.path.isfile("login_detail.csv")):
        df=pd.read_csv("login_detail.csv",index_col=0)
        for i in range(1,len(df)+1):
            if (df["USER ID"][i]==(user_id) and df["PASSWORD"][i]==(password)):
                print(" ")
                print("WELCOME BACK",df["NAME"][i],"TO OUR BAKERY MANAGEMENT SYSTEM ")
                input("Press any key to access Main Menu: ")
                mainmenu()
                break
        else:
            print("INVALID CREDENTIAL!!! PLEASE CHECK YOUR USER ID AND PASSWORD")
    else:
        print("YOU ARE NOT REGISTERED! PLEASE REGISTER YOURSELF")
```

MAINMENU

- IMPORTED PACKAGE

```
#ONLINE FLIGHT RESERVATION SYSTEM
import pandas as pd
import matplotlib.pyplot as plt
import os
def mainmenu():
    while(True):
        print('1.VIEW FLIGHT DETAILS:')
        print('2.ADD NEW FLIGHT INFORMATION:')
        print('3.VIEW ALL BOOKINGS:')
        print('4.MODIFY FLIGHT DETAILS:')
        print('5.DELETE FLIGHT INFORMATION:')
        print('6.DISPLAYING GRAPHS:')
        print('7.BACK TO MAIN MENU:')
```

```
import pandas
import matplotlib
import os
from datetime
```

-TO ADD NEW FLIGHT DETAILS

```
elif c==2:  
    fno=int(input("ENTER FLIGHT NUMBER:"))  
    fname=input("ENTER FLIGHT NAME:")  
    source=input("ENTER YOUR SOURCE:")  
    destn=input("ENTER YOUR DESTINATION:")  
    dtime=input("ENTER DEPARTURE TIME IN 24hHOURS FORAMT:")  
    tno=int(input("ENTER TERMINAL NUMBER:"))  
    fare=int(input("ENTER FARE:"))  
    dict1={'FLIGHT_NO':fno,'FLIGHT_NAME':fname,'SOURCE':source,'DESTINATION':destn,'DEPARTURE_TIME':dtime,'TERMINAL_NO':tno,'FARE':fare}  
    if(os.path.isfile("flight.csv")):  
        df=pd.read_csv("flight.csv",index_col=0)  
        dfl=pd.DataFrame(dict1,index=[len(df)])  
        dfl.to_csv("flight.csv",mode="a",header=None)  
        print("Your details are successfully saved")  
    else:  
        df=pd.DataFrame(dict1,index=[0])  
        df.to_csv("flight.csv")  
        print("Your details are successfully saved")  
    input("PRESS ANY KEY TO CONTINUE")
```

-TO VIEW ALL FLIGHT DETAILS

```
elif c==3:  
    print("*****BOOKING DETAILS ARE*****")  
    if(os.path.isfile("BOOKING1.csv")):  
        df=pd.read_csv("BOOKING1.csv",index_col=0)  
        print(df)  
    else:  
        print("NO FILE EXIST")  
    input("PRESS ANY KEY TO CONTINUE")
```

-TO MODIFY FLIGHT DETAILS

- TO DELETE DETAILS

```
elif c==5:
    df=pd.read_csv("flight.csv",index_col=0)
    print("^^^^^^^^^^^^^^^^^^^^FLIGHT RECORDS BEFORE DELETION^^^^^^^^")
    print(df)
    fno=int(input("ENTER FLIGHT NUMBER\n"))
    for i in range(0,len(df)):
        if(df['FLIGHT_NO'].iloc[i]==fno):
            print("YOUR RECORD FOUND ")
            print("ARE YOU SURE TO DELETE THE DETAILS OF FLIGHT NUMBER")
            print("1.SAY YES TO DELETE!!!!")
            print("2.SAY NO TO DELETE!!!!")
            y=int(input("PRESS 1 FOR YES AND 2 FOR NO:"))
            if(y==1):
                df.drop(labels=i,axis=0,inplace=True)
                print("your deletion has successfully done.")
                df.to_csv("flight.csv")
                print("^^^^^^^^FLIGHT RECORDS AFTER DELETION^^^^^")
                print(df)
                break
            else:
                print("YOUR RECORD RETAINED")
                break
        else:
            print("NO RECORD FOUND OF",fno,"FOR DELETION")
    input("PRESS ANY KEY TO CONTINUE ")
```

```
if c==4:
    print("-----")
    print("                  LINE PLOT")
    print("-----")
    df=pd.read_csv("flight.csv")
    x=df['FLIGHT_NAME']
    y=df['DEPARTURE_TIME']
    plt.title("FLIGHTS ACCORDING TO DEPARTURE TIME")
    plt.xlabel("FLIGHT NAMES")
    plt.ylabel("DEPARTURE TIME")
    plt.plot(x,y,marker='D',markeredgecolor='white',markersize='15',color='black')
    plt.show()
    input("PRESS ANY KEY TO CONTINUE")
elif c==7:
    return
else:
    print("THE CHOICE ENTERED BY YOU IS NOT IN THE GIVEN OPTION\nCHECK & TRY AGAIN!!!")
```

-DISPLAYING RELATED GRAPHS

```
elif c==6:
    print("PRESS 1 FOR BAR GRAPH\nPRESS 2 LINE PLOT\nPRESS 3 FOR HORIZONTAL BAR GRAPH\nPRESS 4 FOR ANOTHER LINE PLOT:")
    print("-----")
    c=int(input("ENTER YOUR CHOICE:"))
    if c==1:
        print("-----")
        print("          BAR GRAPH          ")
        print("-----")
        df=pd.read_csv("flight.csv")
        x=df['FLIGHT_NAME']
        y=df['MAXIMUM FARE']
        plt.title("FLIGHTS WITH THEIR FARES")
        plt.xlabel("FLIGHT NAMES")
        plt.ylabel("FARE")
        plt.bar(x,y,color='green',edgecolor='purple')
        plt.show()
    if c==2:
        print("-----")
        print("          LINE PLOT          ")
        print("-----")
        df=pd.read_csv("flight.csv")
        x=df['FLIGHT_NAME']
        y=df['TERMINAL_NO']
        plt.title('FLIGHT RECORDS ACCORDING TO THEIR TERMINAL NUMBER')
        plt.xlabel("FLIGHT NAMES")
        plt.ylabel("TERMINAL NUMBER")
        plt.plot(x,y,marker='o',markeredgewidth='magenta',markersize='15')
        plt.show()
```

-BACK TO MAINMENU

```
elif c==7:
    return
else:
    print("THE CHOICE ENTERED BY YOU IS NOT IN THE GIVEN OPTION\nCHECK & TRY AGAIN!!!")
```

NEW USER REGISTRATION

Packages imported:

```
import pandas as pd
import os
pd.set_option('display.max_rows',500)
pd.set_option('display.max_columns',500)
pd.set_option('display.width',1000)

print("-----")
print("          WELCOME TO ONLINE FLIGHT RESERVATION SYSTEM      ")
print("-----")

while True:
    print('-----')
    print('          1.ADMIN          ')
    print('          2.NEW USER REGISTRATION      ')
    print('          3.BOOK FLIGHT          ')
    print('          4.EXIT          ')
    print('-----')
    option=int(input("ENTER YOUR CHOICE:"))

    #NEW REGISTERATION MENU

elif option==2:
    uid=input("ENTER YOUR USER ID PLEASE:")
    psd=input("ENTER YOUR PASSWORD:")
    repd=input("RETYPE YOUR PASSWORD:")
    print("-----")
    if psd==repd:
        name=input("ENTER YOUR NAME:")
        age=int(input("ENTER YOUR AGE:"))
        gender=input("ENTER YOUR GENDER:")
        cno=int(input("ENTER YOUR CONTACT NUMBER:"))
        city=input("ENTER YOUR CITY:")
        uid=input("ENTER YOUR USER ID:")
        psd=input("ENTER YOUR PASSWORD:")
        dict2={'NAME':name,'AGE':age,'GENDER':gender,'CONTACT NO.':cno,'CITY':city,'USER ID':uid,'PASSWORD':psd}
        if(os.path.isfile("customer.csv")):
            df=pd.read_csv("customer.csv",index_col=0)
            df1=pd.DataFrame(dict2,index=[len(df)])
            df1.to_csv("customer.csv",mode="a",header=None)
            print("Your details are successfully saved")
        else:
            df=pd.DataFrame(dict2,index=[0])
            df.to_csv("customer.csv")
            print("Your details are successfully saved")
    else:
        df=pd.DataFrame(dict2,index=[0])
        df.to_csv("customer.csv")
        print("YOU ARE SUCCESSFULLY REGISTERED:YOUR USER ID AND PASSWORD")
        input("PRESS ANY KEY TO CONTINUE")
```

BOOKING_FLIGHT MENU

```
#BOOKING FLIGHT MENU

elif option==3:
    while(True):
        print("1.VIEW ALL FLIGHTS:")
        print("2.SEARCH FLIGHTS BY THEIR:\n FLIGHTS NAME AND DESTINATION:")
        print("3.BOOKING:")
        print('4.DISPLAYING GRAPHS:')
        print("5.BACK TO MAIN MENU:")
        ch=int(input("ENTER YOUR CHOICE:"))
```

VIEW ALL FLIGHTS

```
if ch==1:
    print("*****FLIGHT DETAILS ARE*****")
    if(os.path.isfile("flight.csv")):
        df=pd.read_csv("flight.csv",index_col=0)
        print(df)
    input("PRESS ANY KEY TO CONTINUE")
```

SEARCH FLIGHTS BY THEIR FLIGHT NAME AND DESTINATION

```
elif ch==2:
    print("PRESS 1 FOR SEARCH ACCORDING TO FLIGHT NAME\nPRESS 2 FOR SEARCH ACCORDING TO DESTINATION:\n")
    c=int(input("ENTER YOUR CHOICE:"))
    if c==1:
        found='n'
        df=pd.read_csv("flight.csv",index_col=0)
        print(".....NUMBER OF FLIGHTS WE HAVE:.....")
        print(df)
        fname=input("SEARCH DETAILS OF FLIGHTS ON THE BASIS OF FLIGHT NAME:")
        for i in range(0,len(df)):
            if(fname==df['FLIGHT_NAME'].iloc[i]):
                print(df.loc[i:i])
                found='y'
        if(found=='n'):
            print("NO RECORD FOUND")
    input("PRESS ANY KEY TO CONTINUE")
```

```
if c==2:
    found='n'
    df=pd.read_csv("flight.csv",index_col=0)
    print(".....NUMBER OF FLIGHTS WE HAVE:.....")
    print(df)
    dstn=input("SEARCH DETAILS OF FLIGHTS ON THE BASIS OF DESTINATION:")
    for i in range(0,len(df)):
        if(dstn==df['DESTINATION'].iloc[i]):
            print(df.loc[i:i])
            found='y'
    if(found=='n'):
        print("NO RECORD FOUND")
        input("PRESS ANY KEY TO CONTINUE")
        break
    else:
        print("WRONG CHOICE ENTERED BY YOU")
    input("PRESS ANY KEY TO CONTINUE")

elif ch==3:
    print("-----FLIGHT BOOKING MENU-----")
    print("                                     ->AVAILABLE FLIGHTS ARE:          ")
    df=pd.read_csv("flight.csv",index_col=0)
    print(df)
    pname=[]
    gender=[]
    age=[]
    cno=[]
    tfare=[]
    flightno=[]
    totalfare=0
    bno=int(input("ENTER FLIGHT NUMBER FOR BOOKING YOUR FLIGHT:"))
```

BOOKING

```
for i in range(0,len(df)):
    if(df['FLIGHT_NO'].iloc[i]==bno):
        n=int(input("ENTER NUMBER OF PASSENGERS FOR BOOKING FLIGHT:"))
        for j in range(1,n+1):
            pn=input("ENTER PASSENGER NAME "+str(j)+" : ")
            gn=input("ENTER YOUR GENDER:")
            a=int(input("ENTER YOUR AGE:"))
            c=int(input("ENTER YOUR CONTACT NUMBER:"))
            tf=df['FARE'].iloc[i]
            totalfare=totalfare+tf
            pname.append(pn)
            gender.append(gn)
            age.append(a)
            cno.append(c)
            tfare.append(tf)
            flightno.append(bno)
    dict3={'FLIGHT_NO':bno,'PASSENGER_NAME':pname,'GENDER':gender,'AGE':age,'CONTACT_NO.':cno,'TOTAL_FARE':tfare}

    if(os.path.isfile("booking.csv")):
        df1=pd.DataFrame(dict3)
        df=pd.read_csv("booking.csv",index_col=0)
        df1=pd.concat([df,df1]).reset_index(drop=True)
        df1.to_csv("booking.csv")
    else:
        df=pd.DataFrame(dict3,index=[0])
        df.to_csv("booking.csv")
        print("YOUR FLIGHT HAS BOOKED")
        print("PLZ PAY TOTAL FARE PAYMENT FOR THE AMOUNT OF RS=",totalfare," ON ARRIVAL AT AIRPORT")
        print("          THANK YOU          ")
        break
else:
    print("NO RECORD FOUND OF ",bno)
    input("PRESS ANY KEY TO CONTINUE")
```

DISPLAYING GRAPHS

```
elif ch==4:
    print("PRESS 1 FOR BAR GRAPH\nPRESS 2 FOR LINE PLOT\nPRESS 3 FOR HORIZONTAL BAR GRAPH")
    c=int(input("ENTER YOUR CHOICE:"))
    if c==1:
        print("-----")
        print("                         BAR GRAPH")
        print("-----")
        df=pd.read_csv("booking.csv",index_col=0)
        x=df['PASSENGER_NAME']
        y=df['TOTAL_FARE']
        plt.title("PASSENGER NAMES WITH THEIR TOTAL FARE")
        plt.xlabel("PASSENGER NAMES")
        plt.ylabel("TOTAL FARE IN RUPEES")
        plt.bar(x,y,color='magenta',edgecolor='indigo')
        plt.show()
    if c==2:
        print("-----")
        print("                         LINE PLOT")
        print("-----")
        df=pd.read_csv("booking.csv")
        x=df['PASSENGER_NAME']
        y=df['TOTAL_FARE']
        plt.title("PASSENGER NAMES WITH THEIR TOTAL FARE")
        plt.xlabel("PASSENGER NAMES")
        plt.ylabel("TOTAL FARES IN RUPEES")
        plt.plot(x,y,marker='*',markeredgecolor='yellow',markersize='15',color='brown')
        plt.show()
    if c==3:
        print("-----")
        print("                         BAR GRAPH")
        print("-----")
        df=pd.read_csv("booking.csv")
        x=df['FLIGHT_NO']
        y=df['TOTAL_FARE']
        plt.title("FLIGHT NUMBER WITH THEIR TOTAL FARE")
        plt.ylabel("FLIGHT NUMBER")
        plt.xlabel("TOTAL FARES IN RUPEES")
        plt.bart(x,y,edgecolor='red',color='cyan')
        plt.show()
    input("PRESS ANY KEY TO CONTINUE")
```

BACK TO MENU

```
elif ch==5:
    break
else:
    print("THE CHOICE ENTERED BY YOU IS NOT IN THE GIVEN OPTION\nCHECK & TRY AGAIN!!!!")
    input("PRESS ANY KEY TO CONTINUE")
```

RUN

TIME

SIGN UP OPTION

-WHEN PASSWORD MATCH WITH RETYPE PASSWORD

ENTER CHOICE AMONG 1---3: 2

NEW USER ID:mahi

NEW NEW PASSWORD:1450

CONFIRM PASSWORD:1450

please enter the following details:

NAME:mahi kaur

DATE OF BIRTH:19/02/1998

GENDER(M/F):F

PHONE NUMBER:99468772

EMAIL ID:mahi@gamil.com

YOU ARE SUCCESSFULLY REGISTERED

-WHEN PASSWORD DOSEN'T MATCH WITH RETYPE PASSWORD

ENTER CHOICE AMONG 1---3: 2

NEW USER ID:tina

NEW NEW PASSWORD:123

CONFIRM PASSWORD:143

PASSWORD DOESN'T MATCH PLEASE RETYPE THE PASSWORD CAREFULLY

LOGIN OPTION

-WHEN BOTH USER ID AND PASSWORD ARE CORRECT

LOGIN WINDOW

- 1.ADMIN LOGIN
- 2.NEW ADMIN REGISTRATION
- 3.LOG OUT

ENTER CHOICE AMONG 1---3: 1

ENTER YOUR USER NAME:mahi

ENTER YOUR PASSWORD:1450

Welcome mahi To Admin portal...

-IF WRONG USER ID AND PASSWORD IS ENTERED

LOGIN WINDOW

- 1.ADMIN LOGIN
- 2.NEW ADMIN REGISTRATION
- 3.LOG OUT

ENTER CHOICE AMONG 1---3: 1

ENTER YOUR USER NAME:MAHI

ENTER YOUR PASSWORD:1450

Invalid Credentials!!!

LOGIN WINDOW

- 1.ADMIN LOGIN
- 2.NEW ADMIN REGISTRATION
- 3.LOG OUT

ENTER CHOICE AMONG 1---3: |

MAIN MENU

WELCOME TO ONLINE FLIGHT RESERVATION SYSTEM

- 1.ADMIN
- 2.NEW USER REGISTRATION
- 3.BOOK FLIGHT
- 4.EXIT

- 1.VIEW FLIGHT DETAILS:
- 2.ADD NEW FLIGHT INFORMATION:
- 3.VIEW ALL BOOKINGS:
- 4.MODIFY FLIGHT DETAILS:
- 5.DELETE FLIGHT INFORMATION:
- 6.DISPLAYING GRAPHS:
- 7.BACK TO MAIN MENU:

-TO VIEW FLIGHT DETAILS

ENTER YOUR CHOICE:1

--FLIGHT DETAILS ARE:--

	FLIGHT_NO	FLIGHT_NAME	SOURCE	DESTINATION	DEPARTURE_TIME	TERMINAL_NO	FARE
0	101	spicejet	alwar	agra	12.00.20	2	7000
1	102	indigo	gwalior	mumbai	21.30.40	3	6000
2	103	kingfisher	dehradhun	mumbai	23.00.55	3	3500
3	104	airindia	noida	coimbatore	7.55.10	9	8000
4	105	vistara	ajmer	mumbai	18.00.00	9	2500
5	106	vistara	rajkot	chennai	21.15.55	2	7500
6	107	spicejet	thiruvananthapuram	sikkim	10.10.00	5	10000
7	108	kingfisher	aligarh	haridwar	21.30.00	7	9000
8	109	indigo	kanpur	goa	:05:00:30	6	7500
9	110	airindia	chandigarh	udaipur	12.00.00	8	4500

PRESS ANY KEY TO CONTINUE

-TO ADD NEW RECORD FLIGHT DETAILS

PRESS ANY KEY TO CONTINUE

- 1.VIEW FLIGHT DETAILS:
- 2.ADD NEW FLIGHT INFORMATION:
- 3.VIEW ALL BOOKINGS:
- 4.MODIFY FLIGHT DETAILS:
- 5.DELETE FLIGHT INFORMATION:
- 6.DISPLAYING GRAPHS:
- 7.BACK TO MAIN MENU:

ENTER YOUR CHOICE:2

ENTER FLIGHT NUMBER:111

ENTER FLIGHT NAME:vistara

ENTER YOUR SOURCE:varanasi

ENTER YOUR DESTINATION:chennai

ENTER DEPARTURE TIME IN 24hHOURS FORAMT:12:00:00

ENTER TERMINAL NUMBER:7

ENTER FARE:8000

Your details are successfully saved

-TO VIEW ALL BOOKING

ENTER YOUR CHOICE:3

*****BOOKING DETAILS ARE*****

	FLIGHT_NO	PASSENGER_NAME	GENDER	AGE	CONTACT_NO.	TOTAL_FARE
0	107	gulzar	m	51	9899154599	10000
1	107	tahira	f	51	9711898141	10000
2	102	ismail	m	64	9312707096	6000
3	102	tahira	f	56	9312163896	6000
4	108	muharib	m	28	9899892269	9000
5	108	asfa	f	26	9899500875	9000
6	108	arishfa	f	1	8700359621	9000
7	104	saiyaan	m	23	9650463003	8000
8	104	labiba	f	18	7982953884	8000
9	108	sailab	F	5	9650479829	9000

PRESS ANY KEY TO CONTINUE

-TO MODIFY FLIGHT DETAILS

ENTER YOUR CHOICE:4

>>>>>>>>>>>>>>>FLIGHT RECORDS<<<<<<<<<<<<<

	FLIGHT_NO	FLIGHT_NAME	...	TERMINAL_NO	FARE
0	101	spicejet	...	2	7000
1	102	indigo	...	3	6000
2	103	kingfisher	...	3	3500
3	104	airindia	...	9	8000
4	105	vistara	...	9	2500
5	106	vistara	...	2	7500
6	107	spicejet	...	5	10000
7	108	kingfisher	...	7	9000
8	109	indigo	...	6	7500
9	110	airindia	...	8	4500
10	111	vistara	...	7	8000

[11 rows x 7 columns]

ENTER THE FLIGHT NUMBER TO UPDATE:

111

TO MODIFY FLIGHT NAME:

PRESS 1 OTHERWISE PRESS 2:

2

TO MODIFY SOURCE:

PRESS 3 OTHERWISE PRESS 4:

3

ENTER NEW SOURCE NAME

alwar

YOUR SOURCE NAME HAS SUCCESSFULLY UPDATED

TO MODIFY DESTINATION:

PRESS 5 OTHERWISE PRESS 6:

6

TO MODIFY DEPARTURE TIME:

PRESS 7 OTHERWISE PRESS 8:

8

TO TERMINAL NUMBER:

PRESS 9 OTHERWISE PRESS 10:

9

ENTER NEW TERMINAL NUMBER

2

YOUR TERMINAL NUMBER HAS SUCCESSFULLY UPDATED

TO MODIFY NEW FARE:

PRESS 11 OTHERWISE PRESS 12:

11

ENTER NEW FARE:

7000

YOUR NEW FARE HAS SUCCESSFULLY UPDATED

-TO DELETE FLIGHT INFORMATION

ENTER YOUR CHOICE:5

^^^^^^^^^^^^^^^^^FLIGHT RECORDS BEFORE DELETION:^^^^^^^^^^^^^

	FLIGHT_NO	FLIGHT_NAME	...	TERMINAL_NO	FARE
0	101	spicejet	...	2	7000
1	102	indigo	...	3	6000
2	103	kingfisher	...	3	3500
3	104	airindia	...	9	8000
4	105	vistara	...	9	2500
5	106	vistara	...	2	7500
6	107	spicejet	...	5	10000
7	108	kingfisher	...	7	9000
8	109	indigo	...	6	7500
9	110	airindia	...	8	4500
10	111	vistara	...	7	8000

[11 rows x 7 columns]

ENTER FLIGHT NUMBER

111

YOUR RECORD FOUND

ARE YOU SURE TO DELETE THE DETAILS OF FLIGHT NUMBER

1.SAY YES TO DELETE!!!

2.SAY NO TO DELETE!!!

PRESS 1 FOR YES AND 2 FOR NO:1

your deletion has successfully done.

^^^^^^^^^FLIGHT RECORDS AFTER DELETION^^^^^

	FLIGHT_NO	FLIGHT_NAME	SOURCE	...	DEPARTURE_TIME	TERMINAL_NO	FARE
0	101	spicejet	alwar	...	12.00.20	2	7000
1	102	indigo	gwalior	...	21.30.40	3	6000
2	103	kingfisher	dehradun	...	23.00.55	3	3500
3	104	airindia	noida	...	7.55.10	9	8000
4	105	vistara	ajmer	...	18.00.00	9	2500
5	106	vistara	rajkot	...	21.15.55	2	7500
6	107	spicejet	thiruvananthapuram	...	10.10.00	5	10000
7	108	kingfisher	aligarh	...	21.30.00	7	9000
8	109	indigo	kanpur	...	:05:00:30	6	7500
9	110	airindia	chandigarh	...	12.00.00	8	4500

[10 rows x 7 columns]

PRESS ANY KEY TO CONTINUE

-BACK TO MAIN MENU

PRESS ANY KEY TO CONTINUE

- 1.VIEW FLIGHT DETAILS:
- 2.ADD NEW FLIGHT INFORMATION:
- 3.VIEW ALL BOOKINGS:
- 4.MODIFY FLIGHT DETAILS:
- 5.DELETE FLIGHT INFORMATION:
- 6.DISPLAYING GRAPHS:
- 7.BACK TO MAIN MENU:

ENTER YOUR CHOICE:7

-
- 1.ADMIN
 - 2.NEW USER REGISTRATION
 - 3.BOOK FLIGHT
 - 4.EXIT
-

NEW USER REGISTRATION

WELCOME TO ONLINE FLIGHT RESERVATION SYSTEM

-
- 1.ADMIN
 - 2.NEW USER REGISTRATION
 - 3.BOOK FLIGHT
 - 4.EXIT
-

ENTER YOUR CHOICE:2

ENTER YOUR USER ID PLEASE:labiba22

ENTER YOUR PASSWORD:star

RETYPE YOUR PASSWORD:star

ENTER YOUR NAME:zarsh

ENTER YOUR AGE:16

ENTER YOUR GENDER:f

ENTER YOUR CONTACT NUMBER:88765421

ENTER YOUR CITY:jaipur

ENTER YOUR USER ID:zarsh03

ENTER YOUR PASSWORD:zarsh03102004

Your details are successfully saved

| PRESS ANY KEY TO CONTINUE

BOOKING FLIGHT MENU

WELCOME TO ONLINE FLIGHT RESERVATION SYSTEM

- 1.ADMIN
- 2.NEW USER REGISTRATION
- 3.BOOK FLIGHT
- 4.EXIT

ENTER YOUR CHOICE:3

- 1.VIEW ALL FLIGHTS:
- 2.SEARCH FLIGHTS BY THEIR:
FLIGHTS NAME AND DESTINATION:
- 3.BOOKING:
- 4.DISPLAYING GRAPHS:
- 5.BACK TO MAIN MENU:

-VIEW ALL FLIGHTS

-----FLIGHT DETAILS ARE:-----

	FLIGHT_NO	FLIGHT_NAME	SOURCE	DESTINATION	DEPARTURE_TIME	TERMINAL_NO	FARE
0	101	spicejet	alwar	agra	12.00.20	2	7000
1	102	indigo	gwalior	mumbai	21.30.40	3	6000
2	103	kingfisher	dehradhun	mumbai	23.00.55	3	3500
3	104	airindia	noida	coimbatore	7.55.10	9	8000
4	105	vistara	ajmer	mumbai	18.00.00	9	2500
5	106	vistara	rajkot	chennai	21.15.55	2	7500
6	107	spicejet	thiruvananthapuram	sikkim	10.10.00	5	10000
7	108	kingfisher	aligarh	haridwar	21.30.00	7	9000
8	109	indigo	kanpur	goa	:05:00:30	6	7500
9	110	airindia	chandigarh	udaipur	12.00.00	8	4500

PRESS ANY KEY TO CONTINUE

-SEARCH FLIGHT BY THEIR NAME AND DESTINATION

- PRESS ANY KEY TO CONTINUE
- 1.VIEW ALL FLIGHTS:
 - 2.SEARCH FLIGHTS BY THEIR:
FLIGHTS NAME AND DESTINATION:
 - 3.BOOKING:
 - 4.DISPLAYING GRAPHS:
 - 5.BACK TO MAIN MENU:

ENTER YOUR CHOICE:2

PRESS 1 FOR SEARCH ACCORDING TO FLIGHT NAME
PRESS 2 FOR SEARCH ACCORDING TO DESTINATION:

ENTER YOUR CHOICE:2

.....NUMBER OF FLIGHTS WE HAVE:.....

	FLIGHT_NO	FLIGHT_NAME	SOURCE	...	DEPARTURE_TIME	TERMINAL_NO	FARE
0	101	spicejet	alwar	...	12.00.20	2	7000
1	102	indigo	gwalior	...	21.30.40	3	6000
2	103	kingfisher	dehradhun	...	23.00.55	3	3500
3	104	airindia	noida	...	7.55.10	9	8000
4	105	vistara	ajmer	...	18.00.00	9	2500
5	106	vistara	rajkot	...	21.15.55	2	7500
6	107	spicejet	thiruvananthapuram	...	10.10.00	5	10000
7	108	kingfisher	aligarh	...	21.30.00	7	9000
8	109	indigo	kanpur	...	:05:00:30	6	7500
9	110	airindia	chandigarh	...	12.00.00	8	4500

[10 rows x 7 columns]

```
SEARCH DETAILS OF FLIGHTS ON THE BASIS OF FLIGHT NAME:airindia
  FLIGHT_NO FLIGHT_NAME SOURCE DESTINATION DEPARTURE_TIME TERMINAL_NO FARE
3      104    airindia   noida   coimbatore      7.55.10          9  8000
  FLIGHT_NO FLIGHT_NAME     SOURCE ... DEPARTURE_TIME TERMINAL_NO FARE
9      110    airindia   chandigarh ...        12.00.00          8  4500
```

[1 rows x 7 columns]

PRESS ANY KEY TO CONTINUE

```
SEARCH DETAILS OF FLIGHTS ON THE BASIS OF DESTINATION:coimbatore
```

```
  FLIGHT_NO FLIGHT_NAME SOURCE DESTINATION DEPARTURE_TIME TERMINAL_NO FARE
3      104    airindia   noida   coimbatore      7.55.10          9  8000
```

PRESS ANY KEY TO CONTINUE

-BOOKING

PRESS ANY KEY TO CONTINUE

1.VIEW ALL FLIGHTS:

2.SEARCH FLIGHTS BY THEIR:

FLIGHTS NAME AND DESTIATION:

3.BOOKING:

4.DISPLAYING GRAPHS:

5.BACK TO MAIN MENU:

ENTER YOUR CHOICE:3

-----FLIGHT BOOKING MENU-----

->AVAILABLE FLIGHTS ARE:

	FLIGHT_NO	FLIGHT_NAME	SOURCE	...	DEPARTURE_TIME	TERMINAL_NO	FARE
0	101	spicejet	alwar	...	12.00.20	2	7000
1	102	indigo	gwalior	...	21.30.40	3	6000
2	103	kingfisher	dehradun	...	23.00.55	3	3500
3	104	airindia	noida	...	7.55.10	9	8000
4	105	vistara	ajmer	...	18.00.00	9	2500
5	106	vistara	rajkot	...	21.15.55	2	7500
6	107	spicejet	thiruvananthapuram	...	10.10.00	5	10000
7	108	kingfisher	aligarh	...	21.30.00	7	9000
8	109	indigo	kanpur	...	:05:00:30	6	7500
9	110	airindia	chandigarh	...	12.00.00	8	4500

[10 rows x 7 columns]

ENTER FLIGHT NUMBER FOR BOOKING YOUR FLIGHT:108

ENTER NUMBER OF PASSENGERS FOR BOOKING FLIGHT:1

ENTER PASSENGER NAME 1 : sailab

ENTER YOUR GENDER:F

ENTER YOUR AGE:5

ENTER YOUR CONTACT NUMBER:9650479829

YOUR FLIGHT HAS BOOKED

PLZ PAY TOTAL FARE PAYMENT FOR THE AMOUNT OF RS= 9000 ON ARRIVAL AT AIRPORT
THANK YOU

PRESS ANY KEY TO CONTINUE

-BACK TO MAIN MENU

PRESS ANY KEY TO CONTINUE

- 1.VIEW ALL FLIGHTS:
- 2.SEARCH FLIGHTS BY THEIR:
FLIGHTS NAME AND DESTIATION:
- 3.BOOKING:
- 4.DISPLAYING GRAPHS:
- 5.BACK TO MAIN MENU:

ENTER YOUR CHOICE:5

-
- 1.ADMIN
 - 2.NEW USER REGISTRATION
 - 3.BOOK FLIGHT
 - 4.EXIT
-

CSV FILES USED

(AS BACK END)

1.CSV-admin.csv

USERID	PASSWORD
--------	----------

2.CSV-flight.csv

FLIGHT_NO	FLIGHT_NAME	SOURCE	DESTINATION	DEPARTURE_TIME	TERMINAL_NO	FARE
-----------	-------------	--------	-------------	----------------	-------------	------

3.CSV-customer.csv

NAME	AGE	GENDER	CONTACT NO.	CITY	USER ID	PASSWORD
------	-----	--------	-------------	------	---------	----------

4.CSV-booking.csv

FLIGHT_NO	PASSENGER_NAME	GENDER	AGE	CONTACT_NO.	TOTAL_FARE
-----------	----------------	--------	-----	-------------	------------

CONCLUSION

Airlines' reservation system has been made to reduce the manual work and with help this project every work is being processed in accurate and digitised manner. All the records can easily be handled by the user, he/she can easily use it, the data is secure, and only authorized users can login into the application and can make modifications to the records. The user can easily search update or delete the record and which saves their time and energy also.

LIMITATIONS

- ✓ Excel export has not been developed for Booking Enquiry, Passenger Reservation due to some criticality.
- ✓ The transactions are executed in off-line mode, hence on-line data for Airlines Booking, Passenger capture and...
- ✓ Off-line reports of Airlines Booking, Airline Enquiry, Ticket Booking cannot be generated due to batch mode execution.

FUTURE SCOPE

We are trying to give a live reporting which is updated by Airline Companies so that customer gets a live Flights checking, Available seats, Pricing and also planning to provide seats as per their choice so that they can travel very comfortably their journey. We will be trying to provide food facility and choice to customers so that they can feel like their home and more effective amenities. We are also trying to make more attention on Business class people and their requirements.

Our future planning is to take this project towards an Android App and QR Code Scanning. So that a customer can easily contact to the Airlines and they are getting quick Services from Airlines.

We also want in future to place in market so that customer can take more advantages and saves their important time. We are also finding and approaching to companies which are using this type of software.

BIBLIOGRAPHY

In order to work on this project titled “AIRLINES RESERVATION SYSTEM”, the following materials are referred by me during the various phases of development of the project.

BOOKS:

1. Informatics Practices for class XII

By Preeti Arora

2. Together with Informatics Practices

3. Informatics Practices for class XI

By Sumita Arora

WEBSITES:

1. <https://www.bing.com/wikipediaPandas> (software)

2. <https://pandas.pydata.org/>

3. <http://www.wikipedia/>

4. [http://www.flightrreservationssystem /](http://www.flightrreservationssystem/)

5. <https://www.edureka.co/blog/spyder-ide/>

Other than above mentioned books, the suggestions and supervision of my teacher and my class experience also helped me to develop this software project.

